This guide will help you navigate the posters displayed onsite at VITAL2017. In this book you will find an overview of each poster and a number corresponding to the poster’s position in the Grand Ballroom during the poster session. The poster session will showcase projects from the VITAL2017 conference posters, the 2016 Fellows Program, and Gage Award recipients. Authors will be available during the poster session to answer questions about their projects.

The back of the guide features other projects that do not have posters onsite. These abstracts further showcase the innovative and remarkable work that is occurring in essential hospitals across the nation.

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Grand Ballroom, Second Floor
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ERIE COUNTY MEDICAL CENTER
Buffalo, New York

Discharging Challenging Patients: Hospital Community Collaborative
Presenter: Becky DelPrince, RN-BC, Vice President of Systems and Integrated Care

Erie County Medical Center (ECMC) is a level I trauma center with a safety-net designation—37.7 percent of the population ECMC serves is covered by Medicaid or a Medicaid health maintenance organization, or are self-pay. The medical center’s patient population is quite diverse, with many psychosocial needs that impact patients’ health. In January 2015, approximately 15 percent of the inpatient population was designated as alternate level of care (ALC). These patients occupied acute beds even though they no longer required inpatient services, resulting in hospital gridlock and limiting the center’s ability to admit emergency department patients.

In response, ECMC initiated a two-step approach: restructure the care management team; and reach out to and enhance communication with our community providers. We met with more than 47 skilled nursing facilities, adult residences, home care agencies, and other community resources. We created a new network that positively impacted the patient flow of our ALC population, leading to a 53.4 percent decrease of ALC days from 2015 to 2016 and a year-to-date cost savings of more than $866,750. In addition, by working more closely with our community providers, we have fulfilled a need for our patients outside of the hospital.

ERIE COUNTY MEDICAL CENTER
Buffalo, New York

Transdermal Drug Delivery System for Acute Post-Operative Pain
Presenter: Lynne Golombek, RN, Team Leader, Orthopedics
Team member: J. Dobson

This trial aimed to evaluate the transdermal approach to effectively manage
post-operative acute pain in the first 24 hours after total joint knee replacement without additional IV narcotics by placing patients in control of their own pain management. In addition, the trial focused on mobility beginning the same day of surgery and improvement of pain scores, monitored by a third-party vendor.

The transdermal system consists of a patch applied to the patient’s chest or upper arm with an on-demand button patients can press to deliver a controlled amount of medication. The system can deliver a maximum of 80 doses over the 24-hour period and is discontinued before discharge. The trial resulted in a 95 percent decrease in post-operative IV narcotic use, with all patients ambulating the same day of surgery. A 44 percent improvement in pain scores also was noted. Overall, the transdermal drug delivery system holds compelling opportunities for improved pain control and patient satisfaction.

HENNEPIN COUNTY MEDICAL CENTER

Minneapolis

Risk Adjustment Population Health and Medical Scribes
Presenter: Brian Imdieke, NP, Co-Director Medical Scribe Program
Team member: M. Martel

Risk adjustment incentivizes organizations to care for medically complex patients. Hierarchical conditional coding (HCC) is a risk adjustment method that reports medical complexity of the patient population and determines patients’ risk score. Risk scores predict use of services and determines reimbursement for care. HCC is a collection of more than 80 chronic medical and mental health conditions that must be addressed and documented annually by a clinician.

We deployed medical scribes to support documentation for 41 primary care providers (PCP) with an objective to increase the documentation of HCC conditions. Prior to scribe support, PCPs documented 82.2 percent of known HCC conditions for an average per-patient risk HCC score of 0.99. After deployment of medical scribes, these PCPs addressed 83.7 percent of known HCC conditions, resulting in an average risk score of 1.14. During the pre-implementation phase, PCPs not receiving scribe support addressed 78.1 percent of known HCC conditions for an average per-patient risk score of 0.67. Post-implementation, these PCPs addressed 77 percent of known HCC conditions for an average risk score of 0.77.

Risk adjustment presents financial opportunity for essential hospitals caring for complex patient populations. Improved documentation of chronic conditions through support of medical scribes is a potential solution to improve risk adjustment.
Improving Door-to-Needle Time using Lean Transformation  

Presenter: Cindy Drapal, DNP, System Director Neuroscience Institute  
Team members: G. MacDonald, P. Meinel, C. Grennes, L. Isaacs, A. Heller, H. Muller, J. Liebscher, L. Beller

Early initiation of thrombolysis is the key factor to improving quality of life in ischemic stroke patients. The purpose of this project was to streamline the door-to-needle (DTN) time for alteplase administration for eligible ischemic stroke patients using lean transformation techniques.

In January 2013, we created a lean transformation rapid improvement team involving frontline stakeholders. We analyzed our process to identify barriers to flow, define stakeholder roles, remove activities that did not add value, and create a new, streamlined process.

Average DTN time in 2012 was 76 minutes, with 40 percent of cases taking less than 60 minutes. Using lean transformation techniques, the average DTN time decreased to 68 minutes in 2013, with 54 percent of cases taking less than 60 minutes. In 2016, average DTN time further decreased to 49 minutes, with 83 percent of cases taking less than 60 minutes and 71 percent taking less than 45 minutes. Our fastest DTN time to date was 14 minutes.

Lean transformation techniques helped our team streamline processes and sustain improvements, resulting in a significant reduction in DTN time. Our team continues to use lean techniques to exceed the goals outlined in the American Heart Association’s Target: Stroke Phase II.

Assessing Housing Instability at NYC Health + Hospitals

Presenter: Jeremy Ziring, Data Analyst
Team members: S. Gogia, F. Reyes, R. Newton-Dame, J. Singer, D.A. Chokshi

Housing instability is a risk factor for diabetes, depression, and loss of engagement with routine care. We analyzed data from NYC Health + Hospitals’ housing-unstable adult patient population to improve engagement in care. At 14 facilities, patient zip codes were entered at check-in for visits in 2014 and 2015. Housing instability was defined as one or more zip code changes in a 12-month period. Health care utilization by housing-unstable patients was compared with that of housing-stable patients. Problem list data for 2014 was available for a random subsample of 48,000 patients. More than 8 percent of adult patients were found to be housing-unstable in 2014. Housing-unstable
patients had higher mean inpatient and emergency room visits compared with housing-stable patients, even among subpopulations of patients with at least three, five, and 10 visits in 2014. Among the subsample with problem list data, 42 percent of housing-unstable patients had substance use disorders, schizophrenia, alcohol disorders, or mood disorders, compared with 17 percent of their housing-stable peers.

Patients who change zip codes during the year represent a distinct population of individuals who might have unique outreach and care needs. Behavioral health conditions are key challenges in effectively engaging this population of patients in outpatient care.

NYC HEALTH + HOSPITALS

Collaborative Care for Depression: Engaging the Safety-Net
Presenter: Kathleen Tatem, MPH, Data Analyst
Team members: J. Black, R. Newton-Dame, J. Singer

Depression affects 13 percent of all U.S. residents, exacerbating poor health outcomes and increasing costs. The nation’s largest safety-net hospital system, NYC Health + Hospitals, in 2014 launched a Collaborative Care for Depression program to treat depression in the primary care setting. The program is based on the University of Washington’s IMPACT model, using team-based treatment for depression and its comorbidities. Primary care patients were screened at every visit with the Patient Health Questionnaire (PHQ)-2/PHQ-9 tool. Qualified individuals with a positive PHQ-9 score were referred to collaborative care. A patient registry collected patient demographics, PHQ-9 scores, enrollment status, and encounter notes. We examined patient demographics, engagement, and improvement.

We enrolled 2,960 patients across 11 of our hospitals and six community health centers between July 2015 and June 2016, with 1,184 patients enrolled for 70 or more days. Patients were 56.3 percent non-English speaking and 65.5 percent were Medicaid beneficiaries. Most patients—67.2 percent—showed clinical improvement during enrollment, but 35.1 percent of patients were deemed lost to follow-up, with 32.8 percent lost immediately. On average, individuals lost to follow-up were younger. Our preliminary results indicate that a safety-net population can be engaged and show improvement in primary care-based depression management.
Lessons Learned from a New Jersey DSRIP Program
Presenter: Louis Alerte, MS, Project Manager and Data Analyst

Prompted by an interest in improving the health of the population, enhancing the experience and outcome of the patient, and reducing the per capita-cost of care, states are implementing innovative programs reforming how they deliver and pay for care. For instance, delivery system reform incentive payment (DSRIP) initiatives are part of broader Section 1115 Waiver programs and provide states with significant funding that can be used to support hospitals and other providers in changing how they provide care to Medicaid beneficiaries.

This project covers the practical steps in implementing a DSRIP program, as well as the challenges of addressing key socioeconomic barriers for more than 35,000 attributed patients. It shares lessons learned from effectively managing a defined population in an urban setting. The presentation also highlights the use of rapid performance evaluation cycles to ensure positive outcomes.

Expanding Inpatient HIV Testing with Simple Testing Prompts
Presenter: Tri Nguyen, Quality Improvement Coordinator, Center for Comprehensive Care
Team members: S. Walsh, A. Grigoriu, W. Bracco, M. Hart, M. Tran

The Centers for Disease Control and Prevention (CDC) estimates more than 1.2 million U.S. residents are living with HIV and, of those, approximately 14 percent are unaware of their status. Despite hospitals’ wide adoption of electronic health records (EHRs), there has been limited progress in expanding HIV testing in inpatient settings.

The present study was conducted at Jersey City Medical Center to develop an effective way of expanding HIV testing in an inpatient setting. The study used EHR modification in the form of testing prompts, which displayed CDC guidelines for screening eligible patients over the age of 18 for HIV. The number of orders for HIV screenings was recorded for 145 consecutive days before EHR modification to establish baseline data and for an additional 145 days after implementation of the testing prompts.
The average number of daily orders for HIV screenings before EHR modification significantly increased after EHR modification. By implementing EHR testing prompts, Jersey City Medical Center decreased the number of individuals unaware of their HIV status.

**RWJBARNABAS HEALTH – NEWARK BETH ISRAEL MEDICAL CENTER**

*Newark, New Jersey*

**Sepsis Experts—Improved Bundle Compliance and Survival**
Presenter: Jennifer LaRosa, MD, Patient Safety & Clinical Effectiveness Officer
Team members: E. Wasserman, M. Feinber, P. Mason, J. Macheska, M. Verrinder, C. Daquipil

Septic shock remains alarmingly common, with a very high mortality rate worldwide. The Surviving Sepsis Campaign recommends three- and six-hour interventions known as “bundle elements” that collectively reduce mortality. We hypothesized that on-call topic experts, real-time case reviews, and immediate corrective action plans would increase bundle compliance and reduce mortality at our institution. Our intervention demonstrated statistically significant increases in individual and overall bundle compliance rates, as well as a statistically significant reduction in mortality. Topic experts who review and intervene in real time in cases of septic shock can be beneficial in increasing bundle compliance and realizing improved survival.

**UNIVERSITY OF KENTUCKY HEALTHCARE**

*Lexington, Kentucky*

**Partnering for Mental Health Needs on Medical/Surgical Units**
Presenter: Brandy Mathews, DNP, MHA, RN, Assistant Chief Nurse Executive
Team member: M. Woods

Patients with substance use or prescription drug abuse issues often have underlying psychiatric illnesses that could lead to behavioral problems while receiving treatment on a medical/surgical unit. According to research, many patients who abuse drugs and/or alcohol develop combative and abusive behaviors toward staff, including nurses. Such patients require specific nursing skills and intervention, but not all nurses are trained in mental health techniques to adequately care for this challenging patient population. In some cases, mental health care needs go unattended because nurses are focused on potentially life-threatening medical/surgical conditions, placing both staff and patients at risk. We deployed several innovative strategies to address this issue, including establishing a multidisciplinary substance use task force; use of behavioral contracts or care management agreements; weekly huddles to proactively identify potential issues and monitor progress;
and formal multidisciplinary huddles to develop individualized plans of care. Collaboration between nursing executives, direct care providers, psychiatric and medical staff, and risk management was essential to the successful implementation of the strategies.

UT HEALTH NORTHEAST

Tyler, Texas

Increasing Access to CRC Screening in Rural East Texas
Presenter: Carlton Allen, MS, Program Manager
Team members: G. Orsak, W. Sorenson, P. McGaha

Colorectal cancer (CRC) screening rates among underserved populations are low. In 2012, the CRC incidence rate was 13 percent higher and the mortality rate was 15 percent higher in Northeast Texas than in Texas overall. Screening for CRC in asymptomatic patients can reduce the incidence and mortality of CRC. We provided a coordinated screening program to increase access to and delivery of CRC services in a seven-county area of East Texas. Multiple partnerships were established with existing community programs and clinical colleagues in primary care were engaged to assist with recruitment.

For the first funding year, 1,337 screenings were performed as part of our Cancer Prevention Research Institute of Texas (CPRIT) grant, of which 8.2 percent were screened through a fecal immunochemical test (FIT) and 91.8 percent were screened through colonoscopy. For the second funding year, 2,409 screenings were performed, of which 26.9 percent were screened through a FIT and 72.6 percent were screened through colonoscopy. We believe other health systems in Texas could adopt our approach to patient recruitment—which includes population outreach and clinician participation—and strategies to overcome participation barriers to develop a sustainable plan of promoting CRC screening in East Texas.
Population Health

WINNER

MEMORIAL HEALTHCARE SYSTEM
Hollywood, Florida

Healthy Youth Transitions
Presenter: Tim Curtin, Administrative Director, Community Services
Team members: C. Cacace, K. Perez, C. Coronado

In 2001, Florida began designating foster care youth as adults at age 18, cutting them off from government assistance. As such, about 1,000 young people annually aged out of the foster care system. Nearly half were high school dropouts or young parents, and a quarter had experienced homelessness.

In 2010, as part of the Community Youth Services initiative, Memorial Healthcare System launched Healthy Youth Transitions (HYT) to help youth and young adults ages 15 to 22 transition out of foster care. HYT matches participants with life coaches to help navigate daily living, health and money management, social and peer relationships, education, and career skills. Six HYT coaches handle an average of 15 to 20 active clients.

Partially funded by the Children’s Services Council of Broward County, HYT works with more than 20 community partners, including the Fort Lauderdale Independence Training and Education Center.

Since 2010, HYT has served 831 youth. Among participants in the 2015–2016 program:

• 98 percent had no law violations;
• 98 percent of youth demonstrated proficiency in employability and job retention skills;
WINNER

SPARTANBURG REGIONAL HEALTHCARE SYSTEM
Spartanburg, South Carolina

AccessHealth Spartanburg Connects Low-Income Residents to Donated Care
Presenter: Renee Romberger, VP Community Health, Policy, & Strategy
Team members: C. Rothschild, B. Holstien, M. Aycock

Spartanburg County has some of the country’s worst health statistics. For decades, Spartanburg relied on the local emergency department (ED) and one small, free clinic to treat uninsured residents—at staggering costs. In 2009, hospital charity care costs were $116 million, 65 percent of adult residents were overweight or obese, and behavioral health resources were limited. Census data showed that 19.5 percent of Spartanburg County residents lived below the federal poverty level.

The Road to Better Health, a community partnership of more than 40 agencies, launched AccessHealth Spartanburg (AHS) in 2010. AHS connects uninsured Spartanburg County residents living at or below 150 percent of the federal poverty level to a medical home and a network of donated care.

AHS guides participants to medical care and programs for psychological and social barriers to health, including behavioral health care, counseling, substance abuse treatment, specialty medical care, transportation assistance, housing, vocational rehabilitation, continuing education, employment assistance, and prescription assistance. Case managers assist participants who have chronic conditions and multiple barriers to health.

To date, more than 6,000 individuals have enrolled in AHS. From 2009 to 2015:

- combined ED and inpatient costs decreased by 32.13 percent;
- admissions fell by 27.94 percent; and
- charity care costs dropped from $116 million to $68 million.
HONORABLE MENTION

UAB HOSPITAL
Birmingham, Alabama

Improving Health with a Transitional Clinic for Underserved Populations
Presenter: Connie White-Williams, PhD, RN, Director of Nursing
Team member: M. Shirey

Disparities in care for heart failure patients persist in Alabama, which has the highest rate of diabetes and second-highest obesity rate in the United States. One in six Alabama residents lives below the national poverty level.

In December 2014, UAB Hospital opened a transitional care nurse-led clinic inside the hospital to reduce 30-day hospital readmissions in heart failure patients. Funded by a grant, the Heart Failure Clinic serves as a medical home for uninsured heart failure patients without a primary care provider. Patients are referred to the clinic before hospital discharge and evaluated at home, and receive ongoing care at the clinic.

The clinic uses an interprofessional collaborative practice model with a team of nurses, physicians, social workers, health services administrators, public health and health information technology professionals, and community health workers. In a partnership between UAB Hospital and the University of Alabama at Birmingham School of Nursing, students from multiple disciplines complete rotations in the clinic.

The Heart Failure Clinic now is the medical home for 101 patients. Since implementing the program, the 30-day hospital readmission rate improved from 20 percent to 6.7 percent; the average cost per patient decreased from $18,365 to $9,698; and the average cost per encounter decreased from $6,485 to $1,574.

Quality

WINNER

NYC HEALTH + HOSPITALS
New York

Collaborative Care for Depression in a Safety-Net Health System
Presenter: Jessica Black, Program Manager, Collaborative Care
Team members: J. Singer, D. Chokshi, K. Tatem, F. LaGamma, J. Ziring

Depression affects 13 percent of Americans and nearly 20 percent of Medicaid recipients. Yet, research shows that just 10 percent of patients follow up on...
a referral to a mental health specialist if the provider is not co-located in the primary care setting.

Under the New York State Hospital Medical Home Demonstration Project, NYC Health + Hospitals (NYC H+H) began universal depression screening for adults and implemented collaborative care for depression in the primary care setting. NYC H+H aimed to ensure 50 percent of patients would demonstrate clinical improvement related to depression care.

To improve treatment, NYC H+H standardized workflows; wrote scripts for patient encounters and collaborative case meetings; retrained staff to use the depression registry; and utilized evidence-based interventions for patient interactions. Data was shared with leadership through a monthly dashboard, quarterly webinars, and on-site meetings with the collaborative care team.

In 2015, NYC H+H screened about 225,000 adult primary care patients—more than 90 percent of patients—using the Patient Health Questionnaire (PHQ-9), a screening tool for determining the severity of depression. Nearly 15,000 patients—6.7 percent—screened positive. Following the intervention, NYC H+H saw an increase in consultation and treatment for depression, and the patient improvement rate increased from 17.7 percent in the second quarter of 2015 to 57.6 percent in the first quarter of 2016.

**HONORABLE MENTION**

**UAB HOSPITAL**

*Birmingham, Alabama*

The Golden Week Program—Caring for Infants Born Younger Than 28 Weeks

Presenters: Kimberly Nichols, RN, MSN, and Colm Travers, MD, Third Year Neonatology Fellow

Team members: C. Vivek Lal, D. Purvis, S. Roberts, L. Winter

Preterm birth is the No. 1 cause of death in young children. Infants born younger than 28 weeks’ gestation and infants with extremely low birth weights have an especially high risk of death and morbidity outcomes, such as severe intraventricular hemorrhage (IVH), a type of bleeding in the brain. This outcome typically occurs in the first few days after birth and leads to neurodevelopmental impairment.

The University of Alabama at Birmingham Regional Neonatal Intensive Care Unit (UAB-RNICU) created the Golden Week Program to improve care and outcomes of premature infants born at gestational ages younger than 28 weeks. Staff created standardized order sets to establish consistency in five clinical categories—respiratory support; thermoregulation; nutrition and fluid management; infection prevention; and neurological status—and two
non-clinical categories—parent support and satisfaction; and staff and team building. Physicians and nurses participated in phased educational programs over a 50-day span and monthly follow-up classes.

In the eight months after UAB-RNICU implemented the Golden Week Program, the rate of severe IVH in the first week of life fell from 20.4 percent to 10.3 percent. UAB-RNICU hopes to examine short-term and other long-term outcomes in a larger cohort of preterm infants in the future.

HONORABLE MENTION

**ZUCKERBERG SAN FRANCISCO GENERAL HOSPITAL AND TRAUMA CENTER**

*San Francisco*

Improving Specialty Care Access through Assessment, Engagement, and Innovation

Presenter: Rosaly Ferrer, Interim Nurse Director
Team member: L. Day

Specialized care access can be challenging for hospitals serving a safety-net role—providers struggle to refer patients to specialty care clinics, and patients face long wait times.

Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG) launched a three-year program to improve access to specialty care clinics by decreasing third next available appointment (TNAA) time, a measure for the length of time between requesting an appointment and getting one. In early 2013, one-quarter of ZSFG clinics had a TNAA time of more than 120 days.

ZSFG performed a needs assessment of 42 specialty care clinics and developed a clinical dashboard for physicians and nursing leadership. The dashboard displayed operational metrics, such as wait times, no-show rates, patient volume, cancellations, and patient satisfaction. Specialty care working groups developed performance improvement projects, including:

- specialty-specific discharge criteria for patients;
- group education classes for patients;
- an increase in clinic sessions for new and urgent patients;
- telemedicine;
- educational curriculum for primary care providers on common specialty care problems; and
- collaboration with outside hospitals to handle a backlog of diagnostic procedures.
In 2013, 46.6 percent of specialty care clinics had wait times more than 60 days. By 2016, following the initiative, more than 90 percent of specialty care clinics had a TNAA time of less than 15 days.
The 2016 Fellows Program focused on innovative and adaptive leadership. These posters highlight the projects fellows worked on throughout the program, with an emphasis on leadership lessons.*

* Includes posters for fellows registered for VITAL2017 as of May 12.

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**CAMBRIDGE HEALTH ALLIANCE**
*Somerville, Massachusetts*

**Restructuring Population Health**
Fellow: Omar Santiago, RN, MBA

Cambridge Health Alliance (CHA) previously relied on site-specific population health resources to identify patients in need and help them obtain care. Unfortunately, this strategy was unable to attain sustained, positive results at all of CHA’s 12 primary care sites. A new project was launched to centralize resources and standardize workflows with the intent of improving both the volume of patients reached and the overall rate of quality of care interventions for CHA’s accountable care organization (ACO).

Eight resources were centralized, with the quality team providing specific guidance to identify ACO patients in need. The project was successful in increasing the volume of outreach to ACO patients by nearly 100 percent and surpassing a 6 percent average increase in rate of quality of care interventions. Adaptive leadership challenges for this project included stability of stakeholders throughout the project and the fluidity of stakeholders’ resistance to or acceptance of change.

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**CONTRA COSTA REGIONAL MEDICAL CENTER**
*Martinez, California*

**Pre-Operative Evaluation: Bringing Order to Chaos**
Fellows: Samir Shah, MD, and Shelly Whalon, RN

In our integrated system of care delivery, we found our preoperative screening process to be too complex, rigid, and inefficient, which resulted in too many appointments, too many incomplete surgical preparations, too many same-day surgical cancellations, and too many surgical delays. In this study, we used lean improvement techniques to implement a standardized and centralized
patient-centered perioperative process. By engaging stakeholders in incremental and individual tests of change in our surgery clinics, primary care clinics, preoperative clinics, nursing education, anesthesia services and operating room, we could create a perioperative service line that improved care.

Through the initiative, we reduced patients’ “touches” with the system for clearance from five to one; reduced the same-day operating room cancellation rate from 12 percent to 4 percent; reduced the incomplete preoperative clearance rate from 36 percent to 2 percent; and reduced operating room delays.

We used an adaptive approach fashioned by stakeholders to overcome the technical challenges of defining the model for care delivery. Next steps include expansion and scaling of the model while reviewing at surgical outcomes, readmission rates, and patient and provider satisfaction scores.

ERLANGER HEALTH SYSTEM
Chattanooga, Tennessee
Creating the Hospital Authority Reform Act of 2017
Fellows: Alana Sullivan and Stephen Johnson

The Chattanooga-Hamilton County Hospital Authority—known as Erlanger Health System—was created by an amendment to the Private Acts of 1976. Our project involves a detailed examination of the historical Private Acts and subsequent amendments to determine what changes are needed to reflect the current health care environment and the need to be responsive to change. The plan will maintain public accountability and transparency, and will address political challenges. The project is expected to conclude with the passage of legislation during the 2018 session of the Tennessee General Assembly. The changes to the Act will reduce administrative burdens and create greater efficiency and flexibility in several areas such as procurement where outdated purchasing language needs to be modernized.

NYC HEALTH + HOSPITALS
New York
Right Care, Right Place: Connecting Emergency Department Patients to Primary Care
Fellows: Alfredo Jones, MPH, and Carey Hamblin, RN, MSN

This project was chosen as part of the transformation process to shift patient care from a focus on sick care to a focus on well care. Funding has been made available to transform health care systems to keep patients well and, in turn, reduce avoidable emergency department (ED) visits and hospitalization by 25 percent over five years.
The project focused on connecting patients who present to the ED with nonurgent matters to a primary care physician for follow-up, thus preventing avoidable revisits to the ED. In the implementation of the project, we faced several barriers, including how to message the project and define the scope, team collaboration, eliminating assumptions, and understanding differences among team members. Our training in the America’s Essential Hospitals Fellows Program provided powerful tools to assist us with implementing this multilayered and interdepartmental project.

Out of the 25 percent of targeted ED patients, we now are connecting 10 percent to primary care appointments, and we are looking to increase by an additional 10 percent this year. We recognize the challenges that are involved in this initiative and maintain our position, understanding that good primary care to keep patients well is the best thing we can provide our communities.

**UNIVERSITY HEALTH SYSTEM**

San Antonio

Using Technology To Improve Medical Record Documentation

Fellows: Angela Casias, Belinda Garcia-Rattenbury, Velma Perales-Diaz, and Shane Warnicke

This project aimed to improve electronic medical record documentation, particularly in the areas of electronic consenting at registration and back-office procedures, subsequently decreasing paper consenting. The project focused on the general consent, rights and responsibilities, notice of privacy practices forms, as well as back-office procedural/surgical consent forms. We collected baseline data, conducted inventories of technical equipment, and educated all staff, including clinicians and front desk staff. Required technology was provided to those that were lacking tools and dashboards were developed to collect the data to show improved electronic consenting throughout the organization.

But there were plenty of challenges. Hardware inventory was delayed due to vendor supply capabilities, education to more than 800 providers and staff in a short time frame was difficult, and resistance from those not wanting to change from paper to electronic consenting was common.

Overall, University Health System saw marked improvements in electronic consenting in both inpatient and outpatient locations. Success was due in part to executive support, clarity of expectations through the project manager, the organization’s existing lean environment, and leadership of the multi-disciplinary teams.
Clarifying a Strategy for Behavioral Health
Fellows: Carol Henson, MPA, RN, and Brittney Nichols

Northeast Texas faces significant challenges in behavioral health. In some communities, the ratio of patients to mental health providers is nearly 25,000-to-1—seven times the state average. In response, UT Health Northeast developed a behavioral health strategic plan to include three to five goals aligning with the health system’s organizational mission. To identify the goals, institutional and behavioral health leadership were convened for a strategic planning retreat that included a pre-survey of attitudes and beliefs regarding current and future services.

Because of the programming, within a two-year period UT Health Northeast went from offering no behavioral health services to providing outpatient care, integrated care, intensive outpatient programming, and 70 inpatient beds—of which 44 are contracted with the state. While the institution has grown rapidly, there has not been a clearly defined strategy. Going forward, goals will be further refined by a steering committee and operationalized through workgroups. The adaptive challenge of this project was shifting the culture from reactive to proactive planning. In addition to clarifying organizational strategy, communication and buy-in among senior leadership improved and collaboration between the office of planning and operations increased.

Hold it—Let’s Check the Data!
Fellows: Alieu Ann and Martine Pierre-Louis

This project aimed to use demographic data analytics to determine whether non-white patients in the emergency department (ED) were put in restraints at disproportionate higher rates than white patients. We reviewed data from January 1 to June 30, 2016, on emergency department admissions and use of security-assisted restraints in the ED by race, ethnicity, language, and payor source. We found that, contrary to perception, non-white patients were not disproportionately represented among restrained patients.

With this project, we created an operational model for exploring issues of bias in a constructive manner. Our Equity, Diversity, and Inclusion Committee is replicating this model and continuing to measure our ability to deliver equitable care to our diverse patient populations.
Featured Projects
Population Health

BOSTON MEDICAL CENTER

Nurse Care Managers Assist in Office-Based Addiction Treatment Program
Team members: C. LaBelle, J. Charlton

Opioid overdose is the leading cause of accidental death in the United States. In 2000, the Drug Addiction Treatment Act enabled physicians to obtain a waiver to provide buprenorphine in primary care settings as an alternative to methadone clinics. Buprenorphine can suppress withdrawal symptoms, decrease cravings and misuse, and help retain patients’ treatment with opioid dependence. However, physicians were reluctant to integrate the drug into their practices, and less than 5 percent of those eligible applied for a waiver to prescribe the drug.

The State Technical Assistance Treatment Expansion Office-Based Addiction Program with Buprenorphine (State OBAT-B) was established to aid integration of agonist treatment into primary care practices. Using a model piloted by Boston Medical Center (BMC), trained nurse care managers to screen and intake patients, oversee medication management, close follow up, address clinical changes, and work collaboratively with prescribing providing complex care management. The Massachusetts Department of Public Health’s Bureau of Substance Abuse Services awarded BMC a grant to integrate its model at community health centers.

Since the State OBAT-B program’s implementation in 2007, the number of physicians prescribing buprenorphine increased from 24 to 187. More than 12,000 patients accessed treatment through State OBAT-B since 2007. Fifty-one percent of patients treated in the first five years remained engaged in treatment one year after starting, and emergency department visits and hospital admission expenditures have decreased since the program’s start. Across the state in the funded community health center’s 67 percent of patients are retained in care at one year. In July of 2017 federal legislation was passed and now NP and PAs will be able to prescribe buprenorphine. The MA model has been working with state and federal leaders to meet the educational requirements under this new law and get providers trained. It was reported the MA has trained more NP since the legislation was passed than any other state.
**JPS HEALTH NETWORK**  
*Fort Worth, Texas*

**Pathways to Housing Program Reduces ED, Urgent Care Use**  
Team members: D. Zieger, J. Hunt, A. Coomes, N. Lee, G. Chafer, T. McGhee

Studies show that homeless individuals with mental illness or severe disabilities are responsible for a disproportionate share of health care costs due to unmanaged chronic conditions and frequent use of crisis health services. Amerigroup, the largest provider of Medicaid services in Tarrant County, Texas, identified the homeless individuals who were high utilizers of the JPS Health Network’s emergency department (ED) and found that just 24 patients accounted for more than $900,000 in health care in one year.

In response, JPS launched Pathways to Housing, a program to support medically vulnerable homeless patients with housing stabilization and comprehensive care. A JPS team collaborates with Amerigroup and the Salvation Army to provide rental assistance and long-term comprehensive case management.

Housing funds come from a permanent supportive housing grant from the U.S. Department of Housing and Urban Development. Additionally, the Tarrant County Homeless Coalition provides beds for patients, and local churches and shelters donate furnishings. Patients also have access to mCHAT, a health coaching system run by the University of North Texas Health Science Center.

In its first year, Pathways to Housing provided 14 chronically homeless individuals with permanent, supportive housing. Among participants, urgent care use decreased 42.54 percent, behavioral health-related ED use decreased 58.15 percent, and overall ED use decreased 21.74 percent. In addition, JPS estimates $417,938 in savings from the program in 2016.

**RWJBARNABAS HEALTH – JERSEY CITY MEDICAL CENTER**  
*Jersey City, New Jersey*

**Road Map to Address Social Determinants of Health**  
Team members: D. Ratner, S. Walsh, K. Gyekye; L. Alerte, S. Williams, C. Pimentel, R. Ali, K. Dawson, K. King, J. Hoang, G. Hall

Jersey City Medical Center (JCMC) struggled with low patient compliance to care plans, high readmission rates, and inappropriate emergency department use. To improve clinical care, JCMC launched a population health program to encourage self-management for Hudson County, New Jersey residents diagnosed with chronic conditions.

JCMC developed a risk stratification tool to capture patient information on social determinants of health, including health literacy, insurance status,
financial assets, transportation needs, and cultural factors. Through Community Health Trust partnerships, JCMC connected health care with social and public health services by:

- creating a no-cost, online referral database for food, prescriptions, primary care physicians, and legal services;
- providing “nutrition tours” of the local ShopRite grocery store to community members;
- donating fresh produce weekly to members of the Wealth from Health® program;
- training neighborhood volunteers to assist in emergencies before an ambulance arrives and developing a GPS-based application to locate these volunteers;
- providing therapy to high school students with mental health and substance abuse issues;
- developing an immersive, fourth-year medical school elective course in population health; and
- deploying regular health screening stations in the community.

In 2016, JCMC completed 987 community engagement events. A test of members enrolled in the population health program for at least six months found a 44 percent reduction in total costs of inpatient admissions and a 42 percent reduction in inpatient admissions for patients with at least one chronic condition.

SANTA CLARA COUNTY PUBLIC HEALTH DEPARTMENT AND SANTA CLARA VALLEY MEDICAL CENTER HOSPITAL & CLINICS
San Jose, California

Better Health Pharmacy Increases Medication Access, Improves Medication Adherence, Minimizes Environmental Impact, and Reduces Drug Costs

Team members: J. Simitian, S. Cody, P. Lorenz, N. Singh, J. Yoon, M. Phu Le, C. Gallego, K. Pham, Q. To, M. Dao, M. Wheeler

Up to 1 in 4 prescriptions nationally are not filled due to cost, resulting in potential health complications from under-treatment. Additionally, $100 million worth of prescription drugs are discarded from skilled nursing facilities each year in California.

In August 2015, the Santa Clara County Board of Supervisors and the Santa Clara County Public Health Department collaborated with the Santa Clara Valley Medical Center Hospital & Clinics to open Better Health Pharmacy (BHP), California’s first and only drug repository and redistribution pharmacy. BHP collects unused, unopened, and unexpired medications from state-regulated facilities and redistributes them at no cost to uninsured and
underinsured patients. The pharmacy’s main goals are to increase medication access, improve patient’s medication adherence, minimize the environmental impact of discarding unused drugs, and reduce drug costs.

BHP, in San Jose, California, is staffed by licensed pharmacists and technicians from the County Public Health Department as well as community health care volunteers. BHP also collaborates with various local community clinics such as Gardner Health Services and Foothill Community Clinics to increase medication access for those in need.

Since opening, BHP has served 1,782 patients, filled 11,471 prescriptions, and increased medication adherence rates from 59 to 83 percent.

THE OHIO STATE UNIVERSITY MEDICAL CENTER
Columbus, Ohio

The Ohio Colorectal Cancer Prevention Institute

More than 41,500 Ohio residents have Lynch syndrome (LS), a genetic condition that increases risk for colorectal, endometrial, ovarian, gastric, and several other cancers. These cancers are easily detectable and treatable with early and frequent screening, but 95 percent of those with LS do not know they are affected.

The Ohio State University Medical Center (OSUMC) launched the Ohio Colorectal Cancer Prevention Initiative (OCCPI), a population-based study of colorectal cancer (CRC) patients, which built a network of 50 Ohio hospitals working to reduce the incidence of CRC. The OCCPI aimed to:

• screen all newly diagnosed CRC patients and their at-risk relatives for LS;
• deliver technology-driven personalized interventions to CRC patients and their relatives; and
• develop a biorepository of samples and epidemiologic data for future CRC studies.

While OSUMC launched the initiative, patients could remain at their local hospitals, and screenings were given free of charge.

From January 1, 2013, to December 31, 2016, the OCCPI tested 2,578 colorectal cancer patients. Of those patients, 163 (6.3 percent) were found to have a hereditary cancer susceptibility syndrome, including 96 with LS. The OCCPI provided genetic counseling and testing to 441 relatives, 134 of whom were found to have LS.
UT HEALTH NORTHEAST  
*Tyler, Texas*

**Increasing Access to Colorectal Cancer Screening in Rural East Texas**  
*Team members: C. Allen, G. Orsak, W. Sorensen, P. McGaha*

In both Texas and the United States, colorectal cancer (CRC) is the second leading cause of cancer-related deaths. In rural East Texas, incidence of and mortality rates from CRC are especially high. Screening rates for underserved populations, such as minorities and the uninsured, are low.

With financial support from the Cancer Prevention Institute of Texas (CPRIT), UT Health Northeast launched a CRC screening project to increase screening education and access in seven East Texas counties. Their strategy involved:

- reaching out to individuals to increase awareness of CRC screening;
- educating individuals about screening options, including fecal immunochemical testing (FIT) and colonoscopy;
- performing screenings;
- providing access to CRC treatment, if necessary; and
- following up.

UT Health Northeast partnered with community- and faith-based organizations, health networks, and federally qualified health centers to recruit participants. The project provided public transportation to colonoscopies through a partnership with the East Texas Council of Governments GoBus; patients preferring private transportation received gas cards. CPRIT covered screening costs for uninsured and underinsured individuals.

In the project’s first year, UT Health Northeast performed 1,337 screenings, and 85.9 percent of those screened had abnormal results. In the second year, UT Health Northeast provided 2,417 screenings, and 39.4 percent had abnormal results.

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**UW MEDICINE – HARBORVIEW MEDICAL CENTER**  
*Seattle*

**Mobile Palliative Care Homeless Outreach Program**  
*Team members: D. Lam, N. Sugg, T. Boxwell, J. Hubbard, M. Light, T. Madden*

The Seattle/King County Coalition on Homelessness estimates that 8,300 people in the region are homeless on any given night. When people live on the street, they are at higher risk for chronic conditions and a lower life expectancy.

To care for the growing local homeless population—particularly individuals with chronic homelessness suffering from serious illness—Harborview Medical
Center (HMC) and the Seattle/King County Healthcare for the Homeless Network launched the Homeless Palliative Care Outreach Program, the country’s first mobile palliative care program for unhoused individuals in January 2014. The program aims to:

- provide high quality palliative and end-of-life care to a population poorly served by traditional models of palliative care;
- empower unhoused individuals with serious illness by giving them more control over health decisions as their illness progresses;
- prevent unnecessary emergency department (ED) visits and prolonged hospital admissions; and
- eliminate barriers to accessing health care by traveling to meet patients wherever they are living.

The program serves 60 people and provides 720 encounters per year. In the first six months, participants spent 25 percent fewer days in the hospital—1,208, compared with 1,611 before the program—and ED visits decreased by more than 50 percent, from 344 to 158 visits.

Quality

BOSTON MEDICAL CENTER

Boston

Improving Nurse Communication with I-PASS with SAFETY

Team members: N. Lincoln, J. Charlton

Miscommunication during a “handoff”—the transfer of patient care from one provider to the next—can lead to medical errors. In October 2015, Boston Medical Center (BMC) piloted “I-PASS with SAFETY” on the cardiac interventional medical floor to facilitate communication between nurses during shift changes.

Originally developed at Boston Children’s Hospital to guide handoff among physicians, the I-PASS acronym—illness severity, patient summary, action items, situational awareness, and synthesis—guides verbal reports during handoff. SAFETY develops trust between patients and nurses by creating a consistent format for handoff—it stands for stand at the bedside, assess your patient, fall risk, explain plan of care, try to involve your patient, and ask why. Nurses and IT specialists incorporated I-PASS with SAFETY into BMC’s electronic health record to promote sustainability.

Patient satisfaction scores increased an average of 38 percentage points on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. Since incorporating I-PASS with SAFETY hospitalwide,
BMC’s nursing communication domain scores increased from the fifth percentile to the 44th percentile in less than two years. BMC’s fall rate decreased 51 percent, and in fiscal year 2016, the hospital exceeded its patient experience goal for the first time.

LAC+USC MEDICAL CENTER  
Los Angeles

Streamlining Emergency Room Stays with Lean Methodology  
Team members: E. Wei, L. Sarff, A. Luu, B. Raffetto, H. Kim, B. Spellberg

Long emergency room stays pose a major patient safety risk. The LAC+USC Medical Center emergency department (ED) sees more than 150,000 patients per year and struggles with overcrowding and long wait times. In 2014, admitted patients spent an average of more than 11 hours in the ED, and discharged patients spent an average of 8.5 hours. One in six patients left the ED without being seen, before treatment was complete, or against medical advice.

To improve patient flow, an interdisciplinary team used lean methodology to streamline ED procedures. Their interventions included:

• using the vertical patient model to treat patients in chairs;
• standardizing a bedding process;
• minimizing triage screening to place patients directly into open booths;
• developing a practice algorithm for chest pain;
• simplifying the discharge process for low-acuity patients; and
• changing the sign-out process.

In nine months, LAC+USC Medical Center reduced the average ED length of stay for a patient to six hours and reduced patient wait time from 273 minutes to 69 minutes. They also reduced the number of nontraditional dispositions by 9.7 percent. Patient volume increased by 5 percent during this time.

LAC+USC Medical Center shared its results with affiliate hospitals. The Los Angeles County Department of Health Services plan to incorporate the vertical patient model at all its EDs.

NORWEGIAN AMERICAN HOSPITAL  
Chicago

Reducing Health Care–Associated Infections at a Safety-Net Hospital  
Team members: J. Sanchez, T. Siddiqui, R. Bello, J. Campbell, J. Kolka

Health care–associated infections (HAIs) harm thousands of patients each year. In 2012, the Illinois Department of Public Health ranked Norwegian American
Hospital (NAH) among the worst hospitals in the state for patient safety. In 2013, NAH funded an initiative to reduce HAIs, specifically catheter-associated urinary tract infections (CAUTIs), central line–associated blood stream infections (CLABSIs), and methicillin-resistant Staphylococcus aureus (MRSA).

After a gap assessment, NAH improved the management of Foley catheters and central lines. Nurses were required to assess every patient with a Foley catheter for appropriate indication before catheter insertion and promptly remove devices when no longer needed. Staff posted presentation boards in every unit with information about HAIs and how patients can prevent infections. Nurses educated patients and families about HAI protocols and encouraged questions about safety practices.

From 2013 to 2015, NAH saw progress in several bloodstream infection rates:

- CAUTI decreased from two cases to zero;
- CLABSI remained consistent, with one infection; and
- MRSA cases decreased from three to one.

Protecting NAH patients from HAIs helped avoid an estimated 550 days of care and more than $213,000 in hospital costs. NAH hopes to achieve and/or maintain zero CAUTI, CLABSI, and MRSA cases and expand the initiative to reduce Clostridium difficile infection and sepsis rates.

NYC HEALTH + HOSPITALS/KINGS COUNTY
Brooklyn, New York

Innovative Approaches to Bridge Patient Care Through Behavior Analysis
Team members: J. Morrison-Diallo, R. Ananthamoorthy, E. Baptiste

In 2008, a patient collapsed and died in the psychiatric emergency department (ED) at NYC Health + Hospitals/Kings County after being neglected by staff for more than an hour. In response, the Department of Justice, starting in 2010, helped to develop and restructure Kings County psychiatric services in both the ED and inpatient units.

Behavior analysts trained an interdisciplinary team of individuals (RNs, social workers, psychiatrists) in behavioral interventions. These interventions focused on decreasing maladaptive behaviors—such as aggression, hypersexualized behaviors, and non-adherence to treatment—and increasing adaptive, pro-social replacement behaviors, such as social skills and self-management. The BST also worked to:

- increase staff and patient interaction;
- decrease the number of restrictive interventions, such as physical and chemical restraint, and replace them with proactive ones; and
- decrease length of stay.
Since the BST started behavior interventions in 2012, the average length of stay in the inpatient psychiatric units decreased from 25 days to 15 days or less, resulting in a significant cost decrease. Behavior interventions also decreased restrictive interventions and readmissions. The BST program since has expanded within the hospital and partnered with outside community programs.

PARKLAND HEALTH & HOSPITAL SYSTEM
Dallas

Using Inpatient Penicillin Allergy Testing To Improve Antimicrobial Stewardship
Team members: S. Tarver, K. Alvarez, W. Wei, J. Chen, S. Patel, S. Nguyen, D. Khan

Penicillin allergy—the most reported drug allergy in the United States—often is inaccurately documented. Many patients with histories of penicillin allergy had reactions as children, but hypersensitivity to penicillin wanes over time. A documented penicillin allergy, whether accurate or not, can lead to increased time spent in the hospital and greater doses of other antibiotics prescribed over time.

Parkland Health & Hospital System partnered with the University of Texas Southwestern Medical Center’s division of allergy and immunology to offer penicillin allergy testing (PAT) for patients. By increasing the number of patients receiving PAT, Parkland hoped to make meaningful changes to antibiotic prescriptions, ultimately achieving a decrease in broad-spectrum antibiotic use.

Parkland interviewed patients and their families for thorough allergy histories before the test, educated patients about the test and allergic reactions, and gave them wallet cards with their results after the test. Of the 252 subjects tested in the first 18 months, 90.5 percent had their penicillin allergy removed, and only 10 percent of patients had redocumented penicillin allergies.

Records showed significant declines in active orders for antibiotics—including vancomycin, clindamycin, fluoroquinolones, carbapenems, and aztreonam—which reduced costs and fostered antibiotic stewardship.

SIGNATURE HEALTHCARE CORPORATION
Brockton, Massachusetts

Homeward Bound Program Provides At-Home Cardiac Care
Team members: M. Heath, B. Doucette, H. Thompson, S. Taylor, C. Akanegbu, C. Kistner

Signature Healthcare Brockton Hospital (SHBH) serves a community with the fourth-highest rate of low-income patients in Massachusetts. Hospitals with high proportions of low-income patients are three times as likely to report high readmission rates for patients with heart failure, according to a 2011 Kaiser Health News study. Most readmissions are due to patients’ poor understanding

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of their diagnosis, noncompliance with medication, and lack of motivation to change their diet and exercise.

In 2013, 28 percent of patients with congestive heart failure (CHF) at SHBH were readmitted within 30 days, compared with a 24.7 percent national average. SHBH teamed up with the Brockton Hospital School of Nursing to launch the Homeward Bound program, which coordinates care for CHF patients without insurance coverage for visiting nursing care.

Besides weekly home visits from nursing students and faculty, patients received a telemedicine package with an iPad mini, a scale, and a blood pressure cuff—all with wireless connectivity. Each morning, their measurements are sent to a telehealth nurse liaison at the hospital, who relays concerns to physicians. Patients also have access to medication consultation with a pharmacist through Apple’s FaceTime video conferencing application.

Homeward Bound was launched in September 2013 with 22 patients and achieved zero readmissions. The program grew to 64 CHF patients and 70 chronic obstructive pulmonary disorder (COPD) patients through fiscal year 2016.

**UAB HOSPITAL**

*Birmingham, Alabama*

**Reducing Physical Restraints Using Sensory Integration**

Team members: M. Bearden, B. Aguilar, L. Mattox, S. Yakov, K. Ghelani, R. Fargason, B. Birur, K. McKenzie, E. Caine

Loud vocalizations, ambient noise, fluorescent lighting, and frenetic activity can overstimulate patients in inpatient psychiatric units. This stressful environment can cause agitation, resulting in the need for physical interventions, such as seclusion and physical restraints. Restraints are traumatizing and undermine trust between patients and mental health professionals. In addition, most patient and staff injuries occur when restraints are administered.

In UAB Hospital's 20-bed, high-acuity inpatient psychiatric unit, physical restraints were required an average of 26 times per month prior to the project. To reduce agitation, use of restraints, and occurrence of related assaults, multidisciplinary teams introduced sensory reduction measures from October 2015 to May 2016. Research teams used a new sensory reduction measure each month between 4 and 7 pm daily—the time of day during which restraints were most often used. Sensory reduction measures included:

- music;
- meditation, yoga, and mindfulness activities;
- ambient lighting;
- sensory diet activities;
• art activities; and
• reduced speech volumes.

The measures resulted in a significant decline in the assault rate and the time patients spent in restraints. UAB continues to implement sensory reduction measures in its other psychiatric units.

ZUCKERBERG SAN FRANCISCO GENERAL HOSPITAL AND TRAUMA CENTER
San Francisco

Creating a Care Pathway for Low-Acuity Safety-Net Hospital ED Patients

The Zuckerberg San Francisco General Hospital (ZSFG) emergency department (ED) treats approximately 70,000 patients annually. During fiscal year (FY) 2014–2015, 8.3 percent of patients left the ED without being seen, and the overall length of stay for discharged patients was 249 minutes. In addition, ED and hospital crowding caused a 41 percent ambulance diversion rate.

To improve ED patient flow, ZSFG aimed to reduce the length of stay of the least sick patients—those with an emergency severity index (ESI) of 4 or 5—which represent 30 percent of ED volume and are the most likely to leave the ED without being seen.

In December 2015, ZSFG held a two-week workshop, partially supported by a grant from the San Francisco General Hospital Foundation, to design and implement an inter-disciplinary team-based fast-track process to rapidly assess and treat low-acuity patients. The hospital defined a dedicated fast-track location and care team, and tested the process rigorously, including incorporating feedback from several patient representatives.

From FYs 2014–2015 to 2015–2016, average length of stay for ESI 4 or 5 patients decreased from 187 to 147 minutes—a 25 percent improvement. After the ED moved to a larger building in May 2016, length of stay increased to 181 minutes. In response, ZSFG rebooted the fast-track process and decreased the median length of stay to 143 minutes within 42 days. This work has resulted in a 1.5-million-minute reduction in patient wait time over the last year, as well as a reduced left-without-being-seen rate, allowing for over 1,700 patients to be seen who would have previously left. These results were achieved despite increases in patient volumes and without increasing provider staffing.

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Over three weeks, we conducted a pilot assessment of seven hardships on three inpatient services to examine association with a readmission risk scoring system. Of 83 cases, eight were super-utilizers, 17 were high-risk, 33 were moderate risk, and 25 were low risk. Nearly half—38 cases—had at least one of the seven hardships in the assessment, including: 21 that involved homeless; 13 that involved multiple moves; 13 that were behind on rent; 21 that were food insecure; eight that were energy insecure; 13 that had difficulty affording medications; and 14 that had difficulty with transportation. In addition, the distributions of hardships was uneven, with about 62 percent of super-utilizers and 60 percent of those with moderate risk experiencing at least one hardship, while just 29 percent of those at high risk and 32 percent of those at low risk experienced a hardship.

Going forward, we will hold focus groups with inpatient stakeholders to add the hardship questions in the nursing assessment, and we will work to integrate the assessment into EPIC and use it to inform our accountable care planning.

Contra Costa County Behavioral Health set out to improve recovery for clients with mental health and medical co-morbidity. The goals were three-fold: improve self-wellness and wellbeing; increase healthy behaviors and reduce symptoms; and increase cross collaboration with primary care.

Under the initiative, a client was provided up to six months of intensive peer and nurse support, including individualized and group services to support their recovery by incorporating and applying self-management skills. Support included health groups, Wellness Recovery Action Plan (WRAP) groups, individual personalized sessions with the nurse and coaches, and primary care referrals. Patients involved with the initiative show high satisfaction with the services provided and report that their health and mental health has improved as a result of the program.
The initiative now is being expanded to three adult specialty mental health clinics. Staff also are conducting follow-up surveys after clients graduate from the program. Based on feedback from clients and staff, a six-month extension was granted to participants who need more time to transition to a lower level of care.

GRADY HEALTH SYSTEM AND EMORY UNIVERSITY
Atlanta

Improving Diabetic Retinopathy: A Vision for Underserved Populations
Fellow: Jada Bussey-Jones, MD

Diabetic retinopathy (DR) is a public health concern causing preventable blindness in millions of Americans. Twenty-four percent of all Grady Health System charges relate to diabetes. Screening for DR is a high priority but also a challenge as our ophthalmology clinic is over capacity. Our baseline screening rates were low, at 29 percent.

To improve access to care for DR, we worked to decrease patient barriers to care by reserving an ophthalmology work queue specifically for serious diseases and screening the entire primary care center population. We developed protocols; modified the electronic health record for decision support, orders, and reporting; developed workflows; hired staff; and trained current staff.

The initiative went live on October 20, 2016. By February, we had screened 2,546 patients. Nearly half had some pathology, with 23 percent testing positive for a vision-threatening disease. Screening rates increased by 30 percent and we found higher rates of proliferative DR than the national average.

Through the program, leadership learned that DR screening in the primary care setting limits barriers, such as transportation and co-pay, which is important in underserved populations. While initial results were strong, there has been flattening in screening, which suggests a need for ongoing interdisciplinary work.

HARBOR-UCLA MEDICAL CENTER
Torrance, California

Ending Horizontal Hostility Among Nurses
Fellow: Laura Santana, MSN, MHA

Horizontal hostility is a consistent pattern of behavior designed to control, diminish, or devalue a peer (or group). This behavior creates a risk to health care environments and patient safety. The Harbor-UCLA Medical Center organization has partnered with its nursing department to assess and evaluate the root causes of “hostility among nurses.” The organization’s mission includes...
taking care of “our people” and it has been identified as a strategic goal throughout the facility to end hostility among nurses. This project provided opportunities to examine an existing problem that is occurring in health care, as well as existing problems that negatively affect nursing.

HARBOR-UCLA MEDICAL CENTER
Torrance, California

Improving Clinic Operations for Patient-Centered Care
Fellow: Ferlie Villacorte, RN, MSN, MPH

The Harbor-UCLA Medical Center’s outpatient domain sees over 1,000 patients a day. In 2016, we took care of 286,690 patients in the outpatient setting alone. More than 40,000 patients are empaneled to primary care at the medical center. Approximately 60 to 70 percent of those patients have seen their primary care provider, yet success on our quality metrics related to PRIME and HEDIS are dependent on the entire population—not just those we see. The outpatient domain is varied and complex and includes multiple clinical and nonclinical support services. It often is hard to navigate and confusing for patients. Care coordination is fragmented and sometimes nonexistent. While there are multiple initiatives ongoing at any time, communication and sustainability of improvement are needed. The overall patient experience makes it difficult for us to meet our goal to be the provider of choice.

The ideal outpatient domain is one that is easy to access and navigate, and a place where patients feel known and cared for by the clinic team. In an ideal setting, care and care transitions are seamless and the care team is fully aligned, vested, and engaged. Hence, successful ambulatory operations are essential to effective patient care and population health management. Outpatient care continues to expand as increasing numbers of procedures and treatments transition to the ambulatory setting. For these and other reasons, improving ambulatory performance has become a top strategic priority not only for Los Angeles County, but for all health systems nationwide.

The goal is to provide timely, high quality, patient-centered care to all outpatients in a way that is aligned to Harbor-UCLA’s mission and vision. The project consists of developing teams that are proactive, data driven, and collaborate to improve quality, safety, flow, and efficiency across all outpatient areas.
HARRIS HEALTH SYSTEM
Houston

A Just Culture—For Patients’ Sake
Fellow: Parikshet Babber, MD, MBA

At Harris Health, there is a perception that the organization is punitive when dealing with errors. We recognize that these errors will continue unless we fundamentally shift our culture. We believe in transparency and encourage staff to speak up, and we want to take a system approach in dealing with errors. To that end, we established an initiative to implement a just and accountable culture as part of our overall safety culture. We have had many challenges and learned valuable leadership lessons in establishing this culture, such as obtaining buy-in from leadership, being patient-centric, and managing the message. We conclude that establishing a just and accountable culture is absolutely the right thing to do for patients’ sake.

SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
San Francisco

Making it Count: Purchasing Power by the People, Through the People
Fellow: Baljeet Sangha, MPH

The San Francisco Department of Public Health (DPH) has a decentralized and siloed purchasing system that has resulted in inconsistent practices and inefficiency. With an operating budget of $2.1 billion, DPH faces challenges to maximize this purchasing power, including inability to monitor and analyze medical supply purchases departmentwide, difficulty taking full advantage of volume purchasing enhancements to achieve cost savings, and issues establishing controls to ensure that the department receives standard competitive pricing when purchasing medical supplies at all locations.

The goal of our project is to reduce the quantity of contracts for the same services or commodities to increase projected savings compared with historical expenses and expand equitable access to all of DPH for standardized contracts developed. The project focus was to develop a multidisciplinary, patient-focused departmentwide supply chain purchasing team to streamline and consolidate contracts, processes, and procedures. Via the engagement and establishment of the DPH Supply Chain Council, a purchasing audit conducted by County of San Francisco Controller’s Office was successfully closed and multiple contracts have been initiated for consolidation, ranging from direct patient care services to support services.
ST. JOSEPH’S HEALTHCARE SYSTEM  
Paterson, New Jersey

Many Hands, One Heart  
Fellow: Kenneth Morris Jr., MHA, MA

A newly formed coalition of community organizations is focused on improving the health of the underserved and low-income communities in the City of Paterson and the surrounding areas. However, it has struggled with program implementation and resource allocation due to the lack of a formal infrastructure.

As a first step, the coalition agreed to organize as a subsidiary of St. Joseph’s Regional Medical Center as the Passaic County Health Coalition (PCHC) with a long-term goal of coalition independence. Next steps included identifying senior leadership among key community organizations and stakeholders to ensure the executive board of PCHC represented a diverse group of service providers. A diverse board ensured that PCHC could organize more cohesive and comprehensive plans of interventions, reduce duplication of efforts, and improve coordination of services. The coalition then worked to develop shared values and an infrastructure that would support the mission and goals of the PCHC. This work included: recruiting an executive director responsible for fostering community partnerships and the day-to-day management; developing a coalition value proposition and communication plan; hiring key program staff; applying for independent nonprofit status; and establishing a community advisory board.

The PCHC now is established as a thriving and sustainable community coalition focused on improving the health of the high-need, high-utilizing Medicaid population.

ST. LUKE’S HEALTH SYSTEM  
Boise, Idaho

A Case for Change: Removing Irrational Variation in Processes and Policies  
Fellows: Jodi Vanderpool, MBA, and Almita Nunnelee, RN

St. Luke’s Health System holds 34 accreditations and 10 certifications, leading to approximately 115 various regulatory inspections. The required standards, conditions of participation, state and federal regulations, and certification requirements that must be met are diverse and frequently revised, dependent on governing authority.

St. Luke’s is a new entity merging regional sites with varying processes and policies. We recognized this as a risk point and defined, developed, and implemented a standardized system accreditation program. The program was structured to accommodate for ongoing monitoring and regulatory readiness, including proposed and implemented changes. The program identifies risks and provides transparency through appropriate levels of the organization.
To overcome the challenges inherent in aligning a diverse and new system of hospitals, it was critical to keep a focus on the necessity of our project, while engaging our stakeholders through their values. Standardization was achieved through respectful dialogue and actions, collaboration, transparency, and early outcome successes.

TRUMAN MEDICAL CENTERS
Kansas City, Missouri

Revenue Cycle Redesign
Fellow: Doug Brandt

Our challenge was to use best practices to guide the implementation of a new organization-wide revenue cycle software system and related process improvements. The goal was to maximize potential revenue with accurate, efficient, and timely processes while enhancing the patient experience.

The old system was in place for 20 years, and many practices had been adopted to address system limitations with no focus on the patient. We found variations across the health system that needed to be standardized, with root causes drilled back into scheduling patterns, core clinical activities, and basic human behaviors. We had to understand each area’s issues and listen to what mattered most to staff. We also had to convince many departments that change and standardization was needed for the long-term benefit of each area, its patients, and the organization’s fiscal health.

Through this project, we learned the importance of listening and being sensitive to “turf issues,” being prepared to take an occasional step backwards, and giving time for the accepting and embracing of change. Project teams are analyzing various best practices and the organization is positioned to accept major future changes.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES
Little Rock, Arkansas

Silos Offer a Limited Existence
Fellow: Laura Tyler, PhD

The organizational structure at the University of Arkansas for Medical Sciences (UAMS) segments supply chain and value analysis. This segmentation creates obstacles to successful collaboration—which became critical when UAMS joined a member-driven supply network that contractually required compliance with spending targets to avoid substantial financial penalties. The need for communication and transparency across silos was apparent. However, this need was easier to identify than achieve.

Substantial work to recognize and remove barriers has proven difficult.

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The barriers represented a perceived threat to the status quo, as well as a potential loss of influence and power. A lack of trust among the various stakeholders was preventing progress. This was further compounded by a transition in the leadership of the medical center and the implementation of a new organizational structure into service lines. Nonetheless, the contractual requirements necessitated change.

Metrics were put in place to measure success and a journey toward shared organizational alignment was launched. Progress has been made and there continues to be opportunities to build bridges across silos. Integration is a laudable goal when it has the potential to better serve patients and positively contribute to the organization’s fiscal health.

**WVU MEDICINE**  
*Morgantown, West Virginia*

**Beating Cancer, One Early Diagnosis at a Time**  
Fellows: Leslie Harclerode, Rebekah Matuga, and Karyn Wallace

West Virginia has the highest rate of smoking in the nation and the highest incident rate of both lung cancer and related mortality. It’s critical that we get high-risk individuals identified and screened to increase early detection of cancer and help improve outcomes.

The first step of our project was to obtain accreditation for the lung cancer screening program. This involved developing a process to identify high-risk patients meeting the guidelines established by the Centers for Medicare & Medicaid Services; creating a process for them to be screened; building a model that allowed for post-screen navigation on positive findings, as well as annual follow-up for those with negative results; developing a smoking cessation referral process; and participating in the national registry.

On February 2, WVU Hospitals began screening high-risk patients through their accredited program.
VITAL2018 Call for Proposals
Applications open Tuesday, September 5
vital.essentialhospitals.org

2018 Gage Awards
Applications open Monday, October 2
gageawards.essentialhospitals.org

2018 Fellows Program
Applications open Friday, December 1
essentialhospitals.org/education